EXHIBIT P

LINUX JOURNAL

(/)

Product of the Day: Virtuozzo

Product of the Day (/taxonomy/term/32)
by Vendor Written on February 5, 2002

Product: Virtuozzo**Manufacturer:** SWsoft**Address:** 395 Oyster Point Boulevard, Suite 213   South San Francisco, California 94080**Telephone:** 650-875-7185 **E-mail:** info@sw-soft.com (mailto:info@sw-soft.com)**URL:** www.sw-soft.com (http://www.sw-soft.com/en/products/virtuozzo)

Mainframe-like Partitioning and Manageability on Commodity Hardware and Operating System

Virtuozzo is the core enabling technology for HSPcomplete. It is the most advanced multitenancy, virtualization, resource management and clustering technology on the market. Software or hardware vendors can license and customize Virtuozzo for server consolidation or integration into network and system management solutions. Virtuozzo allows users to:

- Manage multiple physical servers as a single resource
- Have multiple (100s) customers with their individual full-featured virtual private servers (Virtual Environments) sharing a single physical server
- Provide each customer Virtual Environment with guaranteed Quality of Service
- Transparently move customers and their environments between servers, without any manual reconfiguration

Product of the Day: Virtuozzo

Multitenancy

Multitenancy refers to hosting multiple customers on a single server. Virtuozzo technology has emerged in response to the expense and lack of scalability in the traditional "single-tenancy" model. In that model, an application running on a remote server replaces an application running on a server managed in house. The client benefits by reducing its IT burden, while the HSP strives to leverage its expertise for as many clients as possible. Using Virtuozzo, an HSP or enterprise customer could achieve a real economy of scale and reduce the cost of the provided service. HSPs also can expand their potential customer base.

Virtualization

Virtualization is a key concept of Virtuozzo. All user-available resources like disk, network and CPU shares are effectively virtualized inside the operating system. This approach gives an ability to achieve maximal performance, keeping users isolated from real hardware and each other. A Virtual Environment (VE), a key unit of Virtuozzo technology, supports each possible isolation level: Fault Isolation, Performance Isolation, Address and Security Isolation, Functional Isolation and Applications Heterogeneity. Virtual Environments are a set of "OS inside OS" -- a full-featured OS box being multiplied inside a single hardware unit. Each box can run inside virtually any application, have a separate root file system and effectively share resources of hardware (memory, CPU, disk, etc). In fact, from the VE user's point of view, each VE looks like the only operating system running on the machine. All customers' configurations are detached from the physical hardware -- allowing easy routine processes automation without manual operations.

Resource Management

Virtuozzo provides a mainframe-like level of cluster resources utilization, monitoring and control on standard, inexpensive hardware. In addition to standard CPU, disk space and network I/O, it also manages memory (user, kernel and disk cache) and disk I/O. This technology makes it possible to guarantee high but variable Quality of Service (QoS) to comply with different service-level agreement (SLA) levels across a cluster of computers.

Clustering

The term clustering has a very wide meaning in computing. The main idea of any cluster of computers is an ability to smoothly integrate the computational power of computers and their data-exchange facilities into a virtual centralized computational center. Key features of such solutions are usually scalability and fault tolerance. Virtuozzo integrates standard, inexpensive hardware into a solid, highly scalable-layered cluster to achieve the goal of a correct level of fault tolerance with minimal expenses. Different configuration options
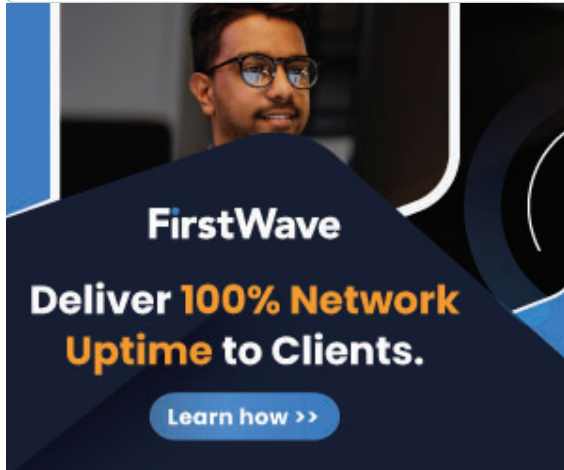
make it suitable for wide range of HSPs -- from entry level up to a cluster with hundreds of nodes. VEs can be easily moved between servers for load balancing and system management.

No comments yet. Be the first! (https://www.linuxjournal.com/article/5796#disqus_thread)

 (https://go.firstwavecloud.com/l/985081/2023-01-10/pnxbmk)

Connect With Us

 (https://youtube.com/linuxjournalonline) (https://www.facebook.com/linuxjournal/) (https://twitter.com/linuxjournal)

Linux Journal, representing 25+ years of publication, is the original magazine of the global Open Source community.

PRIVACY POLICY (https://slashdotmedia.com/privacy-statement/) |
     TERMS OF SERVICE (https://slashdotmedia.com/terms-of-use/) | ADVERTISE (/sponsors) |

Do Not Sell or Share My Personal Information

6/27/24, 9:40 AM   Product of the Day: Virtuozzo | Linux Journal

MASTHEAD
(/CONTENT/MASTHEAD)

RSS FEEDS (/RSS_FEEDS)

ABOUT US (/ABOUTUS)

AUTHORS (/AUTHOR)

CONTACT US
(/FORM/CONTACT)